

REMARKS

Claims 6-8 have been cancelled. Claims 1-5 and 9 have been amended to better define Applicant's invention and to meet the requirements of 35 U.S.C. §112.

Fig. 2E has been corrected. A "Annotated Mark-Up Drawing" and "Replacement Sheet" is attached.

In Claim 1, wobbling or deforming step has been moved into the preamble portion of claim 1, since the wobble or deformation is previously recorded on the recording track. ✓

[Applicants submit that the constituent elements for performing the respective steps in Claims 1 and 9 are fully supported or shown in the drawings as described hereinafter. ✓

Detection of the wobble or deformation is made by a wobble detection circuit 171 in Fig.1 and a recording clock is generated by a PLL circuit 173 in Fig.1. Recording marks are formed by a pattern generator 155. Pre-recorded information of control data is detected through a photodetector 135, an amplifier 152 and the wobble detection circuit 171 and then a frequency basis of the detected pre-recorded information to generate a recording clock. Finally, Applicants submit that the nature of the wobble is illustrated by the wobble signal shown in Fig. 2A. ✓

Regarding claims 2-4, buffer fields 1 and 2 before and after a user data field are shown in Fig.2E. These fields are shown and described as buffer fields, with recording shown therein. Essentially then, the Applicants have described a buffer area as an area that does not record any user data. Furthermore, it is a buffer between user data fields. A inventor is allowed to be his own lexicographer. The variable nature of this field was not shown in the drawings, i.e., that the boundaries between the user data field and the buffer fields 1 and 2 are variable. A proposed amendment to Fig.2E enclosed herewith adds arrows as shown in red, in order to make it clear that the boundaries are changeable in the direction of the arrows. With this amendment, Applicants submit that the drawings properly illustrate the claimed features.

The Examiner rejected all claims under 35 USC § 103 as unpatentable over Gushima et al further considered with JP WO98/43241 or EPO 0800276. Applicants respectfully traverse this rejection.

The present invention is characterized by setting the conversion multiplying factor between a period of the signal obtained by detecting the wobble of deformation and a period of the recording clock, based on the detected pre-recorded information, as defined in claims 1, 5, 9 and 10. ✓

Therefore, it is possible to make the total number of channel bits variable. As a result, it is possible to flexibly change the format structure in sectors according to need. Accordingly, in the present invention, there are advantageous effects obtained, in that it is possible to support the DVD-R type recording mark arrangement, DVD-RAM type recording mark arrangement and other arrangements (See the description from page 4, 25 line to page 5, line 24).

On the other hand, Gushima et al. does not disclose or suggest the above described features of the present invention. The Examiner seems to recognize this, but says that it would have been obvious to modify the base system of the Gushima with the teaching from either of the other cited references (JP WO'241 or EP '276). ✓

↓ According to JP WO'241, plural kinds of write clocks are generated on the basis of the wobble clock to drive a laser. These write clocks have the same frequency, but have phases different from each other. One of the write clocks is selected to have a phase corresponding to a timing of a signal on the disk. However, JP WO'241 does not disclose or suggest setting a conversion multiplying factor between a period of the signal obtained by detecting the wobble of deformation and a period of the recording clock, as presently claimed. ✓

EP '276 relates to an implementation of an inner frequency conversion. In this reference, when a frequency is multiplied, necessary frequency multiplying ratios are prepared, so that the frequency is multiplied to be the required one of plural frequencies. However, EP '276 does not disclose or suggest setting the conversion multiplying factor between a period of the signal

obtained by detecting the wobble of deformation and a period of the recording clock, as presently claimed. Further, Applicants note that EP '276 does not relate to an information recording and/or reproducing method.

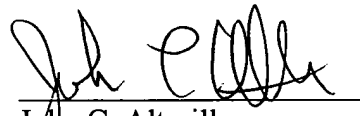
In view of the above, all claims in this application is now in condition for allowance, prompt notice of which is respectfully solicited.

The Examiner is invited to call the undersigned at (202) 220-4200 to discuss any information concerning this application.

The Office is hereby authorized to charge any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayment to Deposit Account No. 11-0600.

Respectfully submitted,

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FIG. 2A

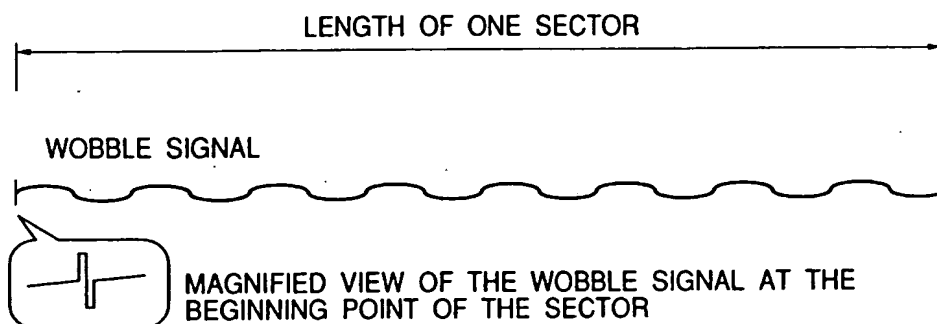


FIG. 2B

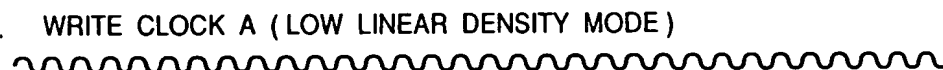


FIG. 2C

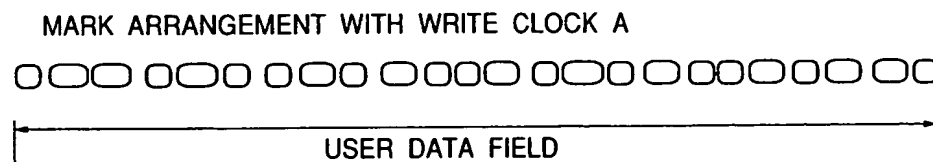


FIG. 2D

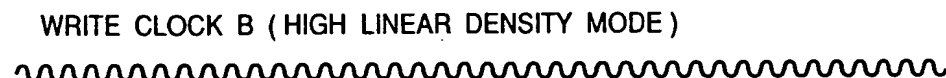


FIG. 2E

